

REMARKS

Claims 35-37 and 39-50 are pending. By this Amendment, claims 35 and 39 are amended, claim 38 is canceled, and an appropriate introductory paragraph referencing all related reissue applications is added to the specification.

I. Description of Claim Amendments

The last clause of claim 35 is amended to change "intersecting with" to --perpendicular to--, and to insert --a direction parallel to-- before the last occurrence of "said predetermined direction." Claim 39 is amended to change "inclined with respect to said second direction" to --parallel and perpendicular to said second direction simultaneously--. In addition, in the claim 39 clause starting "effecting an exposure..." the word "the" has been deleted prior to "defined regions" for clarity and to be consistent with other claims in this application.

II. Supplemental Declaration

A Supplemental Declaration, referring to the amendments made herein, is currently being executed by the inventor and will be submitted in the near future.

III. November 26, 2002 Information Disclosure Statement

An Information Disclosure Statement was filed on November 26, 2002 (i.e., after the September 25 Office Action). The Examiner is requested to consider the information submitted with the November 26 Information Disclosure Statement.

IV. All Formalities Have Been Addressed

As noted above, an appropriate introductory paragraph has been added to the specification. Accordingly, the objection to the specification set forth in item 1, page 2 of the Office Action has been overcome.

Claims 38 and 39 stand rejected under 35 U.S.C. §112, second paragraph. This rejection is moot with respect to claim 38, and has been overcome by the above amendments

to claim 39. Withdrawal of the rejection under 35 U.S.C. §112, second paragraph is requested.

V. All Pending Claims are Patentable

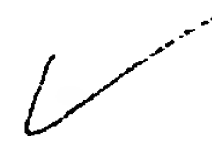
Applicant notes with appreciation the allowance of claims 35-37, 40, 41 and 50. Applicant also submits that the 35 U.S.C. §112, second paragraph rejection of claim 39 having been overcome as explained above, claim 39 also is in condition for allowance. Applicant submits that all pending claims are in condition for allowance for at least the reasons set forth below.

Claims 34-50 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting over certain claims of parent Reissue Application No. 08/994,758. In view of the Terminal Disclaimer submitted herewith, Applicant submits that this rejection has been overcome.

Claim 38 stands rejected under 35 U.S.C. §102(b) over U.S. Patent No. 4,749,867 to Matsushita et al., and under 35 U.S.C. §102(a) over JP-A-4-196513. These rejections are moot in view of the cancellation of claim 38.

Claims 38, 42 and 43 stand rejected under 35 U.S.C. §102(e) over U.S. Patent No. 5,227,839 to Allen. This rejection is moot with respect to claim 38, and is respectfully traversed with respect to claims 42 and 43.

In rejecting the claims, the Office Action refers to interferometer 109b illustrated in Fig. 1 of Allen. Applicant respectfully submits that Allen does not disclose that interferometer 109b "has a measurement axis passing through a substantial center of an irradiation region of said exposure beam and which measures positional information of said movable body [the reticle stage 109a of Allen] relating to a direction intersecting with said predetermined direction [in which the first object is moved relative to the exposure beam]."



Accordingly, Allen does not anticipate or render obvious independent claim 42 or its dependent claim 43. Withdrawal of this rejection is respectfully requested.

Claims 38 and 42 stand rejected under 35 U.S.C. §102(e) over U.S. Patent No. 5,281,996 to Bruning et al. This rejection is moot with respect to claim 38 and is respectfully traversed with respect to independent claim 42.

The Office Action refers to interferometer 17 measuring the position of mask stage 12 in Bruning et al. However, similar to Allen, Bruning et al. does not disclose that interferometer 17 "has a measurement axis passing through a substantial center of an irradiation region of said exposure beam and which measures positional information of said movable body [mask stage 12 of Bruning et al.] relating to a direction intersecting with said predetermined direction [in which the first object is moved relative to the exposure beam]." Accordingly, Bruning et al. also does not anticipate or render obvious independent claim 42. Withdrawal of this rejection is respectfully requested. ✓

Claims 42-49 stand rejected under 35 U.S.C. §102(b) over U.S. Patent No. 4,748,478 to Suwa et al. This rejection is respectfully traversed.

Suwa et al. does not disclose or suggest a scanning type exposure apparatus in which in synchronism with moving a first object in a predetermined direction relative to an exposure beam, a second object is moved, thereby exposing sequentially each of a plurality of defined regions on said second object, as recited in independent claims 42 and 46. Rather, Suwa et al. performs "step-and-repeat exposure" (see, for example, col. 4, lines 3-6 and col. 7, lines 21-44) in which the substrate and mask are held stationary during exposure of a pattern from the mask onto the substrate. Suwa et al. teaches providing multiple patterns (for example, PT1, PT2...) on the mask, and then moving the mask between exposures to change the pattern that is to be imaged onto the substrate.

Because Suwa et al. does not perform scanning exposure, Suwa et al. does not move first and second objects in synchronism in a predetermined direction. Thus, Suwa et al. also does not disclose or suggest the claim 42 "first interferometer" that measures positional information of the movable body (which holds the first object) "relating to a direction intersecting with said predetermined direction." Similarly, Suwa et al. also does not disclose or suggest the claim 46 "first interferometer system" that measures positional information of the movable body (which holds the first object) "relating to said predetermined direction."

Furthermore, Suwa et al. does not disclose or suggest the claim 46 "first interferometer system" having "a plurality of measurement axes for detecting positional information...relating to said predetermined direction," or a plurality of reflection surfaces disposed separately on the movable body in correspondence with said plurality of the measurement axes.

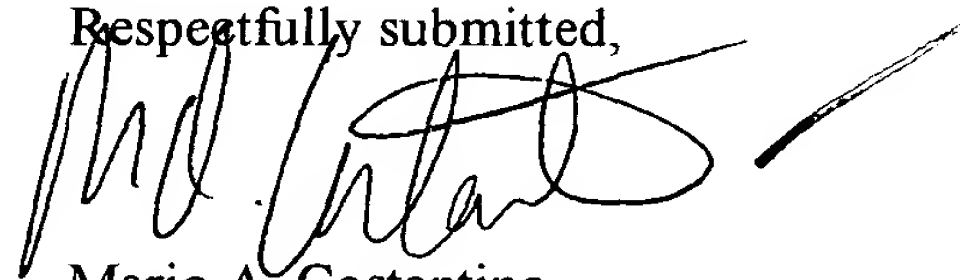
Thus, Suwa et al. does not anticipate or render obvious independent claims 42 and 46 or their respective dependent claims 43-45 and 47-49. Withdrawal of this rejection is respectfully requested.

VI. Conclusion

In view of the foregoing, Applicant respectfully submits that this application is in condition for allowance. Favorable consideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable to place this application in even better condition for allowance, the Examiner is invited to contact Applicant's undersigned attorney at the telephone number set forth below.

Respectfully submitted,



Mario A. Costantino
Registration No. 33,565

MAC/ccs

Attachments:

Terminal Disclaimer
Petition for Extension of Time

Date: January 27, 2003

OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400

**DEPOSIT ACCOUNT USE
AUTHORIZATION**

Please grant any extension
necessary for entry;
Charge any fee due to our
Deposit Account No. 15-0461